

Boulder County Nature Association



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Ovenbird Encounter

Dianne Andrews

A small bird crashed into my window one September day with a dull thud and a few small feathers flying. Startled, I uttered a quiet cry of dismay when I heard her strike the window. From my second floor window I looked out to see her on the damp ground facing the sky. I was hoping she was just stunned but when I went outside she was utterly still. I brought her inside and showed her to my husband and took her up to my study to look in my bird book and confirm my identification, as the ovenbird is a species I had never seen in Colorado before.

I held her gently in my hands. Her obsidian eyes, outlined by white eye-rings, were staring blankly, her small beak slightly open (I could see her tongue), her feathers perfection in their olive-green orderly softness. Parallel lines of dark spots covered her white breast and pale yellow tinted the short feathers under her wings. Her legs and feet were a delicate brownish pink, her head crowned with a patch of orange between two dark stripes. The orange crown feathers were more visible when I ran my finger through them, the under-tail coverts so soft I could barely feel them. I kept hoping, as I held her, that she would reawaken, but the impact of her small body against the glass was so violent she must have died immediately.

Ironically, only minutes before I had wondered, as I looked out my window, whether I would catch a glimpse of migrating birds from my own eyrie in the trees. I often watch the birds flitting in the fruit trees of my neighbor's yard and in the blue spruce that grows near my window. I thought of her awakening that morning, a day fresh from rain that had soaked our dry soils, flying on her unknown mission. I'm glad I was at home, resting a sore leg, and was able to retrieve her before she was carried away by a neighborhood cat. I listened that afternoon to a recording of the ovenbird's song, a simple series of unadorned notes, plain but with a quiet beauty, like the bird's olive drab coat.

Though more plentiful in the East, the range map shows ovenbirds nesting across Canada and scattered through the Rocky Mountains and further west.

In my hometown of Lyons on the eastern slope of the Colorado Front Range the ovenbird is described on the local bird list as a "rarely reported species" and is listed as an Avian Species of Special Concern by the Boulder County Nature Association. The Colorado Breeding Bird Atlas estimates that fewer than 200 to 400 pair of ovenbirds nest in the state. I am glad to know that her species is still passing through here, perhaps even nesting nearby. I will watch more diligently for her kind now, but know my chances of seeing another ovenbird in my neighborhood are pretty slim.

Ovenbirds need relatively large forest tracts for breeding. In the eastern Colorado foothills they frequent ponderosa pine forests that have an understory of Gambel oaks or other shrubs, as well as riparian thickets and aspen forests, at 6000 to 8000 feet. Female ovenbirds construct their nests with pine needles, grasses, dead leaves, hair, and plant stems—domed structures that look like small Dutch ovens and give the birds their name. The females commonly lay three to six eggs and incubate them for 11 to 14 days. The young grow rapidly and fledge within 8 to 10 days. Both parents tend to the fledglings for several weeks until they are able to care for themselves. Ovenbirds occasionally forage in trees, but more commonly they feed on the ground in dense leaf litter and on fallen logs, where they search for insects, spiders, earthworms, and snails.

Windows take a large toll on migrating ovenbirds and other songbirds. Ovenbirds winter in the tropics, primarily in Mexico, Central America, and the Caribbean, and are being affected by deforestation and loss of habitat there. Forest fragmentation of their summer range—with its associated increase in predation and cowbird parasitism—is also affecting ovenbird populations. So these small birds face many challenges in their short lives.

When I think of that morning now and the sound of the ovenbird hitting my window, death seems like a collision with an invisible barrier—the shock of the impact, and then silence, stillness, darkness. We are here, all of us, suddenly. And then, suddenly, we are gone. Perhaps, by chance, some iota of the beauty and mystery of our life will touch another's life and we will be remembered.

BCNA Ecosystem Plan

Walker Mountain, Fourmile Creek/Bald Mountain,
and Winiger Ridge ECAs

by *Dave Hallock*

(This is the fourth in a series of articles that explores the evolution of the Ecosystem Plan and the current status of the core preserves and habitat connectors.)

These three Environmental Conservation Areas (ECAs) are located in the heart of Boulder County's mineral belt. The fragmented land ownership pattern made it problematic for piecing together habitat core areas. But these three all have significant ecological qualities along with geographic importance. They are a bit smaller and more isolated than areas like the North St. Vrain and South St. Vrain/Foothills ECAs. They are a bit like islands within a sea that contains a higher degree of development and fragmentation than other montane areas to the north or subalpine lands to the west.

The Walker Mountain ECA is generally located south of Jamestown, north of Lefthand Canyon, east of the intersections of James Canyon Dr. and Lefthand Canyon, and west of Ward. It contains several roadless areas, stands of old growth ponderosa pine and Douglas-fir, an elk winter concentration area, and a high quality riparian area along Spring Gulch. This area has been a good success story for local conservation actions, most by local residents. Citizens of Jamestown, particularly through the James Creek Watershed Initiative, have been working to protect the water of James Creek and the forest ecosystems surrounding it. They helped convince the Boulder County Commissioners to close Road 102J, linking Jamestown to Gold Lake, to motorized travel due to erosion in James Creek. They have been working to control the creation of social trails by unauthorized motorized recreation in the Walker Mountain area. Several of the property owners south of Overland Road and along the Peak-to-Peak Highway have donated conservation easements to The Nature Conservancy. These easements protected an important animal movement corridor linking Walker Mountain ECA to the Indian Peaks, and effectively expanded the core area. Boulder County has been acquiring inholdings within the ECA to further reduce fragmentation.

Three ecologically significant areas anchor Fourmile Creek/Bald Mountain ECA. Bald Mountain (the one along the Switzerland Trail railroad grade road) is a Colorado Natural Heritage Program (CNHP) Element Occurrence of Foothills Ponderosa Pine Savannah, as well as several other types of montane grassland.

Todd Gulch Fen, located along the Gold Hill Road, is a CNHP Potential Conservation Area. The third area is a one-mile stretch of Fourmile Creek between Sunset and the Peak-to-Peak Highway that is roadless and trailless. This ECA has significant problems from unauthorized motorized recreation. The west flank of Bald Mountain has a social dirt-bike trail heading straight up toward the top. The Forest Service has tried to close this trail several times, but it continues to be used, causing erosion and spreading noxious weeds. The one success story for this area came with assistance from BCNA. The original Forest Plan showed a proposed trail following Fourmile Creek. During the most recent update to the plan, this trail was removed due to public comments.

Winiger Ridge ECA is another core area that is showing improvement over the past 20 years. Winiger Ridge has long been known as an important wintering area and movement corridor for elk. The area contains two important Foothill Riparian areas along South Boulder Creek (above Gross Reservoir) and Winiger Gulch, both recognized by CNHP as Potential Conservation Areas. And there is growing success in controlling unauthorized motorized recreation. The local Preserve Unique Magnolia Association has been actively working with the Forest Service to rein in inappropriate activities. A major success occurred last year when the Forest Service gated and closed a road heading south of Winiger Gulch, making the area between Winiger Gulch and South Boulder Creek an effective core preserve. BCNA and other organizations had been pressing for this action for over a decade. Though the gate lock was destroyed by small explosives (our own local terrorists), the gate has been relocked. This area will take ongoing vigilance to protect.



Vesper Sparrow with Meal — G. Oetzel
Walker Ranch, June 2007

March Treasure-Hunt in the Indian Peaks

by Janice Forbis

Five snowshoers embarked upon a treasure hunt on March 12th to Lefthand Reservoir in the Indian Peaks Wilderness Area. We chose a southwestward route from the Brainard Lake winter parking area for our pleasant winter tour. It was an unseasonably warm day with no wind, a perfect day in the Rocky Mountains. The treasure we were seeking was White-tailed Ptarmigan, *Lagopus leucurus*. We were led by teacher, naturalist, and writer, Joyce Gellhorn.

In summer, Ptarmigan have a mottled brown appearance, but we were looking for birds sporting their winter plumage of pure white except for black beak and eyes. The White-tailed Ptarmigan is an alpine species and hardy member of the grouse family, Tetraonidae. Permanent residents of the high mountains, these grouse spend their lives at or above treeline, seeking protected sites in the winter in shrub and forested areas. We hoped to find them in the spruce/willow timberline area where they seek their winter food, mainly willow buds and catkins, with some birch and alder, on shrubs extending above the snow or growing on wind-scoured slopes.

As we snowshoed up the trail, we enjoyed identifying the various conifers and noted the differences in their needle, bark, and cone characteristics and their distinctive crowns. We especially admired the remains of the female cones of the subalpine fir (*Abies lasiocarpa*), a spike-like cone axis resembling candles on



Ptarmigan in a Snow Hollow
Joyce Gellhorn

the tree. We were fortunate to spot a Pine Siskin in the treetops.

As we emerged from the trees near Lefthand Reservoir and into the willow habitat of the Ptarmigan, we began our treasure hunt in earnest. During the winter, Ptarmigan are known to move from one sheltered slope or patch of food to another. With expert instruction from Joyce, we learned to identify the signs left by the birds in the snow. We saw small scooped out snow burrows where roosting birds were protected at night from cold winds and possible predators. During our search, we saw tracks of a fox, porcupine, and pine marten. We learned to recognize the ptarmigan tracks and discern the direction the birds were traveling.

Ptarmigan have feathered feet, unique among chicken-like birds, which improve their ability to walk in snow. The tracks led from one willow patch to another. Finally, we saw the sign that explained why we did not yet see any of the birds – wing marks in the snow indicating that they had flown, not leaving any tracks for predators to follow. The pattern of the wing marks indicated their direction of flight, so we continued on.

After recognizing several more patterns of tracks around willow thickets and wing marks in the snow, we found a small group of birds, some feeding on willows, and some burrowed into the snow with only their heads visible. They seemed surprisingly tolerant of humans and we were able to get within five or six feet of them while talking and moving quietly.

We observed their behavior and photographed them for several hours. Briefly, we observed the inflatable red combs above their eyes, especially evident in males. We heard the ptarmigan quietly calling to each other, seeming to keep track of where all the individuals in their flock were. At one point a crow flew overhead, cawing, and all of the birds abruptly ceased their feeding movement until the crow had passed and then all simultaneously started feeding again. After feeding and moving about, all 12 birds in the flock settled quietly under a spruce tree, out of the sun, to roost for the afternoon.

As we snowshoed back down the trail, we all agreed that it had been a successful day and a very rewarding treasure hunt.

The Bald Eagle: Back from the Brink!

By Sue Cass

It seems only fitting that, as Boulder County's resident breeding Bald Eagles prepare to fledge precious young, we revisit a time when this prospect seemed unimaginable. The American Bald Eagle has made a comeback, not only to Boulder County where, in recent years, it has nested for the first time in recorded history, but to most of North America as well. The eagle's decades-long absence was brought about by the introduction of an insidious insecticide called dichlor-diphenyl-trichlor-ethane, or DDT. Most of us possess a vague awareness of the DDT melodrama that played out during the last half of the last century. We know Bald Eagles and Peregrine Falcons were especially hard hit and thin shelled eggs had something to do with the bird's downfall, but how on earth could this have happened? The gut-wrenching story is compelling to say the least!

In 1939, Swedish chemist Paul Müller discovered the biocidal properties of DDT, a chemical compound that was first produced in 1874. A potent, non-selective organochlorine pesticide, DDT was used by both the Allied and Axis powers during World War II to protect their militaries from disease spreading mosquitoes and lice that vector the dreaded and deadly typhus. During a recent encounter, I shuddered as a grizzled veteran related how he and other soldiers and marines literally "bathed in the stuff". Interestingly, Müller was awarded the Nobel Prize for Chemistry in 1948 for his now infamous discovery.

The longevity of a chemical in any medium is measured by its half-life, the amount of time required for the concentration to fall by half. The half-life of DDT has been variously calculated at between 12 years in some cultivated soils and 57 years in uncultivated soils in regions of temperate climate which includes most of North America. Potency and persistence make DDT a fearsome double-edged sword.

In reality, DDT is not especially toxic to birds and very high exposures are required to kill birds outright. Why, then, did DDT inflict the damage it did? DDT and its main metabolite, DDE, are estrogenic, meaning they mimic the effects of estrogen. Large birds at the top of complex food chains like the Bald Eagle, Peregrine Falcon and Osprey acquired non-lethal doses of DDT through a process called bioconcentration. Being fat-soluble and persistent, the chemicals accumulate in fatty tissue and are passed from prey to predator. The estrogen effect in the female interfered with her ability to metabolize and absorb calcium carbonate which, in turn, resulted in thin shelled eggs which were crushed under her own body weight during incubation. In the few eggs that survived incubation, the embryo died from dehydration as fluids were lost through the thin shell. It is believed the estrogen effect in the male resulted in sharply reduced

sperm levels. All this conspired to cause massive reproductive failure resulting in catastrophic population declines over a relatively short period of time and again, amazingly, all via non-lethal exposure.

Raptors were not the only birds to suffer from the effects of DDT.

Because DDT and its derivatives are fat soluble, a bird can actually acquire a lethal dose and not succumb for weeks or months later when it begins to burn stored body fat, say during a protracted migration or at the onset of winter with its associated reduction in food availability. When stored body fat is metabolized, organochlorines are released into circulation, quickly reaching lethal levels in the bird's nervous system. Snow Geese suffered lethal exposure to DDT on their wintering grounds in Texas and fell out of the sky by the thousands over Missouri and Iowa during their northern migration. In Europe, Eider Ducks were exposed to DDT as they wintered along the Rhine River. Eider hens, which typically fast during incubation, died on their nests enmass on their breeding grounds in Scandinavia. Brown Pelicans were nearly obliterated along the California coast, a direct result of toxic wastewater being discharged into sewers by the chemical plants that manufactured DDT. Two decades after the use of DDT had been banned in the US in 1972, scientific surveys found more than 100 tons of DDT in ocean bottom sediments off the Palos Verdes Peninsula.

By the mid 1950's, a torrent of DDT was raining down on cities and towns across the country in an attempt to control mosquitoes, gypsy moths and Dutch elm disease. On the campus of Michigan State University in East Lansing, DDT was sprayed on vaulted American elms in a futile attempt to save them from the ravages of Dutch elm disease. In a classic case of secondary poisoning, earthworms consumed the toxic decaying leaf litter and, in turn, were consumed by American Robins. Successive waves of doomed, convulsing birds littered the campus until there were none left. Horrific incidents like this inspired Rachel Carson to publish her epic tome *Silent Spring* in 1962, warning of the environmental and human dangers of the indiscriminant use of pesticides.

During the 1970s and 1980s, DDT was banned progressively in country after country as the devastating environmental effects became increasingly apparent. DDT is still manufactured in the US today, primarily for use without restriction in tropical and sub-tropical regions where the ravages of malaria persist and where high temperatures, moisture levels and exposure to direct sunlight reduce the half-life to a level that may justify the trade-off.

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Can any earthly good come from a tragedy such as this? The answer, miraculously, is yes! The horror that was DDT grabbed us by our collective throats, provoking a congregate conscience and consciousness that spurred revolutionary changes in the laws that affect our air, land and water. The Environmental Protection Agency and Endangered Species Act were born of this fever. We've learned that through perseverance and the elimination of threat to life and environment, some species can come back from the brink. The Bald Eagle tells us this is so.

Editor's note: Five Bald eagle nests fledged 6 young in Boulder County last year. As of early June this year, 4 active nests contained at least 7 young.

Field Trip Report:

May 10 Shanahan Canyon Breeding Bird Survey

Nine early risers hiked up Shanahan Ridge toward the big slab on Bear Peak. When we entered the burn area halfway up the ridge, the first birds we saw included a Lewis's woodpecker, two mountain bluebirds, and a western bluebird. We also saw or heard green-tailed towhees, pygmy nuthatches, and red crossbills in this old burn.

Farther up we broke out of the forest into a lush meadow along Shanahan Creek just below the Mesa Trail. A yellow-breasted chat and a Virginia's warbler were singing here, along with black-headed grosbeaks, western tanagers, plumbeous vireos, and spotted towhees. Everyone got good looks at a cordilleran flycatcher perched on the edge a chokecherry thicket. Above the Mesa Trail, piles of bear scat littered shade-dappled meadows colored by senecio, larkspur, spring beauty, candytuft, and orange arnica.

Raptor sightings on the way down included several turkey vultures, a likely Cooper's hawk, and a pair of red-tailed hawks. In all we observed 35 potential nesting species. Betty Naughton has adopted this area for the ecosystem stewardship project

(Shanahan Canyon is one of 27 areas that have been adopted so far). It looks like she's made a good choice.

— Steve Jones (co-leader), Betty Naughton (co-leader), Sue Beggs, Diane Carter, A.D. Chesley, Fern Ford, Cathy (Ford), Janet MacLachlan, Margaret Smith.

Front Range Mountain Lion Study

by Jim McKee

The Colorado Division of Wildlife has now received permission from Boulder and Jefferson counties and from the city of Boulder to conduct the first year of a planned ongoing study of mountain lions along the urban front range from I-70 to the Boulder/Larimer county line. Plans are to capture two lions each in Jefferson County and Boulder County Open Space areas and in Boulder Open Space and Mountain Parks. Capture will involve the use of baited cage traps and hounds. Because of divided land ownership patterns in the areas chosen they will attempt to tree lions using leashed hounds to prevent encroachment on privately owned lands.

Captured lions will be fitted with both GPS and VHF collars. GPS collars will permit regular readout of lion locations with periodic down loads so that their land use patterns can be mapped. VHF collars will facilitate real time tracking when necessary.

The objectives of the study include the following:

1. Determine the effectiveness of cage traps and hounds for capturing lions on the urban front range (leashed hounds haven't been tried before).
2. Determine functionality and suitability of GPS collars in front range habitats.
3. Implement lion-human risk protocols and communications within CDOW and among public entities and determine if modifications are necessary.
4. Determine the feasibility of aversive conditioning techniques on lions within urban/exurban areas, including use of hounds and beanbag bullets (this has never been proven to work).
5. Evaluate political/social response to lion research activities.

Information obtained above will be used to guide the design of future research efforts (if funded) to directly assess management prescriptions. The logistical, social, and political information obtained from this pilot study will define the limits of what can be done and where the project can be conducted. Long-term studies will begin by 2008 and previously collared lion will likely be integrated into these studies.

BCNA Summer Events Calendar

Sunday, July 15, 6-9 a.m.: Breeding bird survey on Flagstaff Mountain, with Steve Jones (303-494-2468) and A.D. Chesley. The Boulder block for the Colorado Breeding Bird Atlas 20-year update includes parts of Gregory Canyon and Chapman Drive. We will search these areas for fledged young and adults feeding young. Meet at the Gregory Canyon parking area (left off Flagstaff Mountain Road at the first turn) at 6 a.m.

Saturday, July 21, 7:30-11 a.m.: Upper Gregory and Long Canyon birds and butterflies with Jan Chu and Steve Jones (303-494-2468) . Meet at the Realization Point parking area about 3.5 miles up the Flagstaff Mountain Road. Co-sponsored by Boulder County Audubon.

Sunday, July 22, 4-6 p.m.: All members are invited to our summer board meeting at Carol Kampert's, 3060 Ash Ave., in South Boulder (east from Broadway between Baseline and Table Mesa). Call 303-499-3049 for details or directions.

Sunday, Sept 23, 5-7:30 p.m.: Equinox potluck picnic and twilight/moonlight hike. Bring something to share, plus drink and table setting, to the picnic shelter at Meyers Gulch (Walker Ranch). Call Sue Cass (303-494-5345) for information.



**Bald Eagle near Boulder Reservoir — G. Oetzel
BCNA Raptor Survey – January 2007**

**Boulder County Nature Association
2007 Summer-Fall Field Classes**

Note: Scholarships of up to \$50 per class are available. Visit www.bcna.com for details.

Flowers of the Alpine Tundra

Instructor: Joyce Gellhorn

Explore Colorado's alpine tundra, the land of spectacular scenery above the trees. Learn about the unique adaptations of plants living in an area of environmental extremes and a short growing season.

Thursday, July 12, 6:30-9:30 p.m., indoor class
Saturday, July 14, 8 a.m.-3p.m., field class
Tuition: \$50 (\$40 for BCNA members). To register contact Joyce at (303) 442-8123, or jgellhorn@sprynet.com

**Microphotography:
Butterflies, Beetles, and Beyond**

Instructor: Steve Jones

There's a whole new world waiting out there in the grass. Take spectacular photos of butterflies, dragonflies, spiders, and smaller creatures, and in the process, learn intimate details about their lives.

Thursday, August 23, 7-9 p.m., indoor class
Saturday, August 25, 7 a.m.- noon,
South Boulder Creek and Gregory Canyon
Tuition: \$50 (\$45 for BCNA members). To register call Steve at 303-494-2468, or e-mail Stephen.jones@earthlink.net

Quaking Aspen and Bugling Elk

Instructor: Joyce Gellhorn

In autumn, aspen trees turn gold and elk begin their rutting season. Learn how elk interact with aspen. Visit Rocky Mountain National Park to explore aspen groves in different stages of coloration and to observe elk courtship behavior.

Monday, September 24, 7-9 p.m., indoor class
Tuesday, September 25, 2:30-9 p.m., field class
Tuition: \$60 (\$50 for BCNA members). To register call Joyce at 303-442-8123, or e-mail at jgell

Help wanted!
Editor for the BCNA newsletter.
Contact Sue Cass, 303-494-5345

Summer Natural Events Calendar

July 1: Venus is just 0.8° from Saturn low in the west at dusk. You may have to travel a few miles east of Boulder to see this spectacle.

July 30: Full Moon Rises at 9 p.m.
 Thunder (Lakota)
 When the Buffalo Bellows (Arapaho)
 Deer-Hiding (Osage)

August 1: Lammas, the time of hot weather, the beginning of the harvest, and the approximate halfway point between the summer solstice and autumn equinox, is celebrated.

August 12-13: Peak activity for Perseid meteor shower. No moon this year, so it should be good.

August 28: Full moon rises at 7:53 p.m. A lunar eclipse, visible from Boulder, reaches maximum totality at 4:37 a.m.
 Black Cherries Ripening (Plains Indians)
 Harvest (Ojibwa)
 Corn in Silk (Ponca)

September 23: Autumn equinox occurs at 3:51 a.m.

September 26: Full moon rises at 6:43 p.m.
 Dear Paw the Earth (Lakota)
 Drying Grass (Arapaho)
 Harvest (European-American)

The "Harvest Moon" is the moon closest to the autumnal equinox. On average, the moon rises 50 minutes later each night. But around the autumn equinox, the nearly full moon rises just 25 minutes later each evening. Hovering close to the horizon just after sunset for several consecutive days, the moon provides extra light for farmers to harvest their crops. This apparent anomaly is caused by the Earth's tilt relative to the orbit of the moon. In September the lunar ecliptic makes its shallowest angle relative to the eastern horizon. For more details see *Sky and Telescope* magazine or consult their Web site: (<http://skytonight.com/about/pressreleases/3306631.html?showAll=y&c=y>)

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For the calendar, class offerings, research results, publications, newsletter pictures in color, and other related information:
www.bcna.org

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The membership year is January 1 to December 31. Those who join after October 1 are considered members in good standing through the following year. All members receive this quarterly newsletter. Supporter-level members and higher also receive a complimentary copy of each BCNA publication.

Please make checks payable to "Boulder County Nature Association" or "BCNA" and mail to:
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